Module Title: Necessary and Sufficient - An Overview: Suggested Delivery Time - 50 minutes plus Q&A

Discussion Points

Instructor/Trainee Activity

A. Introduction

1. Administrative Issues [Evacuation routes, Logistics (lunch, breaks, etc.), Schedule].

2. Why are we here?

Awareness of the Necessary and Sufficient (N&S) Closure Process and how it fits in the Standards Based Management System (SBMS) Getting back to basics with respect to basic management principals. Training is a living process.

Start with the end in mind.

Protection of the Worker/Public/Environment remains paramount.

3. Where are we now?

Emphasis on nuclear/high hazard facilities Assumption that all DOE safety orders apply One size fits all approach/Graded approach dysfunctional Discretionary standards made mandatory Over emphasis on paper versus performance Discuss truck tiresmon bicycle

4. So what are the Challenges?

Skepticism/Ricebowls
Integrate Prescriptive/Multiple Initiatives
Apply Decision Making at the Right Level
Provides Sufficient Guidance and Management Support
Deal with Eroding Experience Base
Reconcile Changing Missions/Downsizing/Instability
Deal with Declining Federal Budget
Eliminate gridlock

- Title Slide on screen (Slide 1).
- This is Tara O'Toole's (Asst. Sec. ES&H) number one ES&H priority.
- Show trainees the DOE Criteria Document (Blue Book).
- Show Slide 2. (First illustrated slide).
- Show Slide 3. Invite discussion of examples.
- After A.3 make the point "we must change."
- Show Slide 4.
- One caution as we move forward, this initiative is designed to help us "do it right," not to avoid today's more rigorous safety expectations and the difficult changes they often entail.

Discussion Points

B. N&S Closure Process

1. Introduction

Where do we start? - The N&S process is a disciplined approach to selecting the standards appropriate to do the work. DOE has selected the N&S process as the place to begin working on moving to a standards-based operation.

As you will see in the presentation, the N&S is a natural place to begin since it will have a substantive effect on how we do work.

- A Stakeholder demonstrates that the existing set of standards is NOT N&S. A stakeholder must demonstrate to the satisfaction of the agreement parties that the set of standards being used is not sufficient to provide adequate protection.

Demonstration is to be made through evidence that shows the set of standards, not a lack of effective implementation of the standards, is the reason for not providing adequate protection.

For example, a stakeholder might demonstrate that the existing set of requirements is not sufficient for a large earthquake. Or another example might be that the existing standards are no longer necessary due to a change in mission. For instance, when a laboratory's experimental reactor was shut down and all fuel was removed from the facility, many requirements were no longer necessary.

• If at least one of the criteria is satisfied, the Responsible Organization assigns responsibility for conducting the process to a Process Leader.

3. Producing a N&S Set of Standards

 Process Element 1. Defining the Work (including the Hazards, the work environment, and the Expectations).

Instructor/Trainee Activity

Show Slide 5.
Note: For Part B

- Text in normal print is text from the N&S Closure Process document.
- Double underline text is key information.
- Italicized text emphasizes material that can be used as appropriate in the training.
- Discuss ownership knowledge and common expectation attributes.
- Stress "must demonstrate" standards are not sufficient. It's not good enough to propose that some other set may be better.

- The Responsible Organization is the organization that has direct responsibility for performing the work.
- Show Slide 10.
- Stress the focus on work.

Discussion Points

This process element is a key to the success of the N&S process and is a significant departure from current practices. Specifically, the N&S process starts with the identification of the specified work activity including associated hazards, environment, and expectations.

The work must be understood in light of the hazards, and the expectations. The hazards allow us to understand the protection and controls needed; the expectations establish the performance objectives and provide for a shared understanding of success.

Obviously, our missions and work activities are much more complex than changing a flat tire. As a result, a more defined and disciplined process will be required to adequately address our work, hazards, and expectations.

The Agreement Parties with the assistance of the Process Leader select management, the resource authority, stakeholder, and technical personnel as necessary to form a team that is known as the Convened Group. This group acts as a steering group for the process of identifying a set of N&S standards. This group will provide guidance to and interact with the Process Leader and the team that will be formed to identify the N&S set of standards.

Instructor/Trainee Activity

• What are some different expectations that there may be for a work activity, and how they would affect the scope or nature of the activity. For example, how might the work or hazards change if the person shown in Slide 8 had a different expectations (e.g., rushing his wife to the hospital to have a baby?, herniated disc?)

- Show Slide 11.
- This defines the Convened Group.

Discussion Points

- The efficacy of the N&S set for each work activity or facility will depend on the ability of the participants to "readily defend" the process and the results to all stakeholders. To achieve this result, it is critical that the selection of participants and protocols of the N&S process be "readily defensible."
- The Process Leader, drawing on the resources of the Agreement Parties, operational and technical experts, resource authorities, stakeholders, and particularly the Responsible Organization acquires information on the work to be performed. The stakeholders who can and want to contribute may include officials of the local governments, local citizens' groups, unions, and oversight organizations. The process Leader, under the advice and guidance of the Convened Group, organizes the information received as an initial basis for identifying the N&S set of standards.
- As a common current practice, <u>subject matter experts</u> develop or identify standards and their implementing procedures, often in isolation from those who are responsible for getting the work done. In N&S, line management, operational experts, and stakeholders, when appropriate, along with subject matter experts now work as <u>a team</u> to develop the set of N&S standards. This infusion of operational experience and stakeholder perspective will substantially improve the process and cost effectiveness of the resulting set of applicable standards.
- The Process Leader, calling on the resources of the above named organizations defines the work and the hazards in terms of the following initial conditions:
 - Performance expectations and objectives,
 - Actions that will be performed,
 - Physical conditions under which the work will be performed,
 - Materials and conditions that could cause adverse consequences,
 - Uncertainties about the work,
 - Organization and management,
 - Resource availability and constraints,
 - Stakeholder concerns
 - Stakeholders' channels of communication

Instructor/Trainee Activity

- Stress that the credibility of Convened Group Members and authority to carry out responsibilities is important to defensibility.
- Stress need to avoid "just another bureaucracy".

- Use only selected examples from this list.
- Stress need for constraining stakeholder involvement.
- Emphasize expectations at the start of the process; e.g., goals for safety, quality, and operations.

Discussion Points

- Stakeholders may also be on the CONVENED GROUP if they desire and should be invited to participate. Criteria for participation of Stakeholder Groups could be developed with their input to facilitate effective involvement. Election of nonparticipation should be their choice.
 - Local government officials
 - Regulators
 - Citizens Groups
 - Oversight organizations
 - Unions
 - and workers
- The process of defining the work and the hazards may involve hazards analysis. (For existing work/facilities, much of this hazards analysis may already be available). One of the fundamental changes in the process of identifying the set of N&S standards over the current practice is that the process starts with the definition of the work and hazards.

In this step it should be possible to differentiate between levels of hazards; e.g., those standards applicable to a reactor, and those applicable to other work activities.

• Process Element 2: Creating the Team(s).

The <u>quality of the product</u> (the N&S set of standards) is <u>directly related to the quality of the team(s)</u>. Credibility and efficacy of the effort depend on the <u>makeup of the teams and their abilities</u>. These abilities include expertise in the areas of the work, hazards, and expectations.

- The Process Leader gathers the Convened Group with the purpose of defining the criteria for the teams that need to be formed. These teams would include the team that will identify the set of N&S standards and, if a separate team is considered necessary, a confirmation team.
- These criteria include the functions, relationships, and composition of the teams. Considerations include the complexity of the work, the existing set of standards, the number of disciplines, and differing opinions that are known to be held. The criteria also include the qualifications for the technical experts. The Convened Group is in the best position to determine these qualifications.

Instructor/Trainee Activity

Stress this point again.

• Show Slide 12.

• Point out that expertise may not be resident at each site or facility and that those resources must be brought into the picture.

Discussion Points

Criteria for qualification of team members are critical and, as a minimum, should consider such factors as knowledge and direct experience with the work, detailed knowledge of the hazards, educational background, the types and levels of involvement of technical disciplines involved in the work, knowledge and experience of management systems required to support the work, knowledge, experience in the application of standards, common sense (good judgment and wisdom), and ability to work in a team setting.

Operations experts, subject matter experts, and stakeholders (when appropriate) will be on this team. People who know and are involved in the work will be on the team.

- The Convened Group also arranges with the appropriate management for the individuals selected, consistent with the criteria, to be assigned to team.
- Process Element 3: Defining and Agreeing to Protocols and Documentation.

This step in the N&S process develops protocols and documentation that will be used in the identification, defense and confirmation of the set of standards produced.

Except for four minimum documentation requirements, there is no set formula regarding the number and types of protocols and documentation required. The local situation and judgment regarding that situation will determine the requirements for these protocols and documentation.

- The Convened Group establishes protocols, as necessary, such as:

Who will approve the final set of standards.

The identification, approval and maintenance of N&S sets of standards will be at the organizational level appropriate for effective management.

Schedules, time limitations, and approval defaults,

Resolution of differing opinions,

Interactions between teams.

The Convened Group also established documentation requirements such as:

Instructor/Trainee Activity

- Consider asking trainees for their ideas of appropriate criteria which may cover the points of this paragraph.
- Stress the need for competency and credability of team members.
- Stress again that line representation and people familiar with the work, hazards, and expectations will be on the team.
- Stress need to go outside organization for help if expertise is not resident at the facility or site.
- Show Slide 13.

 Stress that the degree of rigor will depend on the nature of the work and hazards under consideration.

• This is a key point.

Discussion Points

Format and contents for plans and procedures.

The responsibilities and qualifications of team members.

Team consensus and differing opinions.

Decisions relating to steps such as defining the work, selecting the team, selecting and confirming standards, and approving standards.

The basis for what constitutes a N&S set of standards for this work activity.

- The Process Leader, with the participation of the identification team members, carries out the activities as directed by the Convened Group such as: establish team protocols on how the team's business will be conducted and the documentation requirements for the team.
- The degree of formality and the extent of documentation depend on the work, the potential impact of the hazards, the uncertainties of the work, the degree of stakeholder involvement, the complexity of the work, and the performance expectations.
- Completion of Process Element 2, Identification of team(s).
- Process Element 4: Identifying the N&S Set of Standards.
 - The team identifies and reaches team consensus on the N&S set of standards. The team draws upon its collective experience to achieve this objective. This set will become the basis for planning, performing, and assessing the work activity under consideration.

Instructor/Trainee Activity

• Use selected examples of the bullets in this section.

- Stress that identification team will conduct/receive Team Orientation a/o Cross Training specific to the work activity; e.g., cross training the team on the hazards, the work process, and legal implications.
- Show Slide 14.
- Discuss 4 minimum documentation requirements:
 - The set
 - The basis for the set
 - Implementation assumptions that are conditions for approval
 - The work and the hazards
- Show Slide 15.
- Show Slide 16.

Discussion Points

One of the current problems that the N&S approach will correct is the blanket application of all or many of the requirements to work activities where this full set of requirements is not appropriate; i.e., applying reactor requirements and standards to low hazard facilities. This "one size fits all" approach is not cost effective, diverts management attention and may actually impact unfavorably on safety management. The N&S set of standards will not include non-applicable standards or inappropriate standards.

- The team can ask for additional information needed to define the work, evaluate relevant sources of existing standards, write additional standards as needed to achieve sufficiency, and request additional resources. The team identifies which of the existing standards constitutes a N&S set. Only those standards necessary to provide adequate protection of workers, the public, and the environment are included.
- If it is not possible to identify a N&S set to meet the current performance expectations and objectives, an outcome of the process may be to recommend that the work definition be revised, or that new standards be developed, or both.
- Examples:
 - In research and development, the work activity may involve new processes and hazards that are unique and heretofore not encountered. Thus, the need to develop a new standard.
 - While determining the N&S set, the Identification Team may find that the requisite standards for the work (as it was defined by the Convened Group) will require resources (financial for design modifications or human for protection coverage) not available. Thus, the need to revise the work scope.
- The Team identifies any assumptions used by the team regarding implementation of the N&S set to achieve consensus, and the team's views on any unique resources required to implement the set of standards.

Instructor/Trainee Activity

• This is a restatement. Re-emphasize "one size fits all problem."

- Additional resources may include expertise external to the Identification Team, responsible organization or the contractor or DOE.
- If challenged on this point, "adequate protection" may include standards that go beyond safety based on local conditions such as corporate expectations and public sensitivities.
- If the team cannot identify a N&S set, they report back to the Convened Group/Process Leader.
- Use this example to demonstrate the step above.

Discussion Points

- The Team identifies those applicable Federal, State, and local laws, regulations, and rules that are required to be included in the N&S set of standards but are judged not to add value to achievement of adequate protection. This identification will serve as the basis for pursuing exemption from these standards.
- <u>No justification is required for applicable non-</u>regulatory standards that are not selected for the set.

However, the team must be able to respond to questions regarding how safety concerns/requirements are covered by the resulting N&S set.

The team should consider, in conjunction with the development of the N&S set of standards, the performance measures that will be used to measure successful implementation of the standards and performance of work.

The team, or a separate confirmation team if such was deemed appropriate By the Convened Group, then reviews the information available to the identification team and confirms that the set of standards is N&S to satisfy the performance expectations and objectives of the work. This confirmation includes the determination that the set of standards will be feasible.

Determination of whether confirmation is performed by an internal identification team approach or by a formal, separate confirmation team may depend on the level of hazards involved in then work activity and the nature of stakeholder concerns.

 Process Element 5: Approving the N&S Set of Standards.

The approval authority is, at a minimum, the customer and the responsible organization.

The approval authority is prescribed in the approval protocol developed by the Convened Group in Process Element 3.

The approval process is facilitated by agreement parties' involvement in appropriate steps throughout the N&S set development process.

Instructor/Trainee Activity

 Note that exemptions must be used, where allowed, to deal with "legal requirements. DOE Orders are not in this category.

- Show Slide 17.
- Unbiased objectivity is important to this step.
- In other words, when the process is complete, the work can be accomplished in accordance with then approved set.
- The Convened Group makes this determination.
- Show Slide 18.

Stress DOE involvement.

Discussion Points

- The approval authority judges whether the N&S process has been correctly implemented.
- The approval authority determines whether the confirmation provided by Process Element 4 is adequate to support approval. If this confirmation is not adequate to support approval, the approval authority may request that the deficiencies be corrected, or initiate its own confirmation action.
- This approval authority approves or disapproves the set of standards in accordance with the established time limits or approval default.

This approval constitutes a commitment to provide the necessary resources through the normal budget process.

Approval does not constitute approval of exemptions to applicable laws and regulations. Process Element 4 provides that those standards, in laws and regulations, that do not provide any value to protection of workers, the public, and the environment will be identified as a basis for seeking exemption through the prescribed processes.

The identification, approval, and maintenance of N&S sets of standards will be at the organization level appropriate for effective management.

4. Summary

Instructor/Trainee Activity

• Emphasize that the approval focuses on the identification and confirmation processes.

- Stress that approval within specified time limits is required by the process.
- Stress importance of resource availability to success of process.
- N&S cannot relieve legal requirements. Requirements must be exempted by other means.

Discussion Points

- View of Total N&S process:

 - ♦ For those who will be participating in the process as process leaders, team members, or agreement parties, there is a six-hour training program that addresses the roles, responsibilities and process in significant depth.
 - $\Diamond \frac{Process\ starts\ with\ work,\ hazards,\ and}{expectations.}$
 - \(\frac{Process focuses on the "Right Stuff" and not "All the Stuff" and not the "Minimum Stuff".}
 - *∆* Local conditions determine protocol.
 - ♦ Line/Operations/Engineering involvement.
 - ♦ Constructive DOE involvement.
- Key benefits derived from the process include:
 - (clearer understanding of the work, hazards, expectations, and uncertainties.

 - A shared understanding of the basis for not only performing the work, but the basis for evaluating and assessing the work.
 - And with all this, as better certainty for successful performance of the work. There is a price: fidelity to the process.

Remember, if all participants cannot "readily defend" the process, they will not be able to defend the N&S product.

Instructor/Trainee Activity

Show Slide 19.

• Show Slide 20.

- Show Slide 21.
- Ask students for examples of attributes of process integrity (e.g., competency-quality protocolsadherence to protocols-management involvement).

Discussion Points Instructor/Trainee Activity **C**. **Implementation** Show Slide 22. 1. Introduction: We must understand the overall content into which the N&S process fits. We all can recognize, as we discussed at the beginning of the session, that there is a broad array of challenges that need to be addressed. The challenges can be seen as elements in the following Restate a few of the challenges areas: identified from Slide 1. **Implementation** These 4 areas are defined in the Infrastructure Standards Program Criteria Assessment/Feedback Document. **Integrated Management** Together, with the N&S process, these elements form **Note:** Transition here to overview of the DOE's vision of a Standards Based Management System. 4 areas mentioned. DOE is working with contractors to better understand and to address these areas. Implementation involves a wide array of tools and Show Slide 18. techniques including work planning integrated scheduling, training, policies, procedures, communications, safety and hazards assessment, assessments including criteria, performance baselines, resource availability, and implementation plans. 2. Question: Will the N&S process and other SBMS policies, guidance, and processes significantly change the management systems now in place that support the implementation activities across the complex? 3. Answer: Probably Not! However, DOE and contractors are evaluating the actions necessary to ensure: Each set of changes must have realistic work plans By "realistic" we mean realistic in Work plans must be coordinated and integrated time (schedule), realistic in resource DOE and its contractors must "see it through" identification and acquisition, and Close monitoring and strict change controls must be realistic in its funding (priority). Implementation constraints must be identified and

eliminated

Discussion Points

Implementing work plans must ensure <u>continuity</u> between existing programs and new or revised requirements defined by the N&S set. It is extremely important that safety expectations not become confused during the implementation process. We are guaranteed to fail if we abandon an existing set of standards or work practices before we implement a new N&S set.

D. Infrastructure

1. Introduction:

Every successful enterprise has a corporate infrastructure that supports both the strategic and tactical activities involved in delivery of their products in a manner that meets all regulatory and contractual requirements and customer expectations.

2. Question:

Does the implementation of the N&S closure process and other elements of a Standards Based Management system mean that a major revolution is required in the infrastructure and management systems of DOE and its Contractors?

3. Answer:

No. However, any business undergoing substantial change, including changes in mission, customer expectations, or regulatory environment, must continuously evaluate its infrastructure and management systems to ensure that all business equations remain balanced. A few examples of areas where some institutions will need to review and strengthen their management systems or infrastructure include:

- **A.** Work Planning/Scheduling predictability, stability, critical resources, integration
- **B.** Work Activity Based Business Systems change control for incremental changes, including technical, financial, and schedule

Instructor/Trainee Activity

 By coordinated, we mean coordinated within DOE, within the contractor organization, and between DOE and its contractors.

Show Slide 23.

Failure to deal effectively with the myriad of small changes is known as "Death by a thousand duck bites."

Discussion Points

- C. Roles/Responsibilities/Accountability Changes to account for N&S closure process as a living system
- **D.** Regulatory Interface Infrastructure that implements and supports the regulatory process will require adjustment as "N&S sets" are identified. Regulatory implementation must be addressed:
 - Common basis for assessments and audits
 - Training for inspectors and DOE regulators
 - Eliminate informal expansion of requirements
- E. Configuration Control Maintaining the integrity of the N&S set, including assumptions (e.g., design), procedures, and safety documentation.
- F. Other There is no attempt here to define a complete list of potential infrastructure issues. One may expect that some organizations or facilities within organizations are better positioned than others based on significant program improvements accomplished over the past several years. For example, many organizations have made enhancements in areas such as commitment/action tracking systems, infrastructure for dealing with external stockholders (Regulatory/Political/Public), training, communications, and developing contemporary planning and scheduling systems. There may be significant opportunity for lessons learned across the complex as adjustments are made.

E. Assessments/Audits (Evaluate Work | • Performance)

1. Introduction:

Assessment is a tool to determine if work is performed as expected to identify opportunities to perform work more efficiently, and improve standards.

2. Question:

Will the N&S process cause improvement in the assessment process or add still another set of criteria to be evaluated to?

3. Answer:

While the implementation of the N&S closure process and the resulting standards do not directly require change to the assessment/oversight process, it will provide the tools and highlight the need for alignment of expectations among the various assessment entities and provide the common basis for measuring results, including feedback for improvements and enforcement.

A. Common Performance Criteria

- Defining a N&S set will allow common expectations to be built into work planning, operations, and oversight activities.
- Both internal and external assessment functions must become aligned and rebaselined to the new

Instructor/Trainee Activity

Show Slide 24.

 Performance Criteria (common expectations) should be the same for operators, managers, assessors, and regulators.

14

Discussion Points

Instructor/Trainee Activity

F. Integrated Approach to Management

1. Introduction:

During the past decade of major changes in customer expectations, competition, and regulatory explosion, most major US corporations have repeatedly identified the need for a holistic and integrated approach to management both within their business and between their corporation and their contractors (Chrysler, Walmart). Many who failed to see and act effectively on this imperative no longer exist (Eastern Airline).

2. Question:

Will the current management practices, attitudes, and behaviors support the successful implementation of the N&S Closure Process and other necessary Standards Based Management System changes?

3. Answer:

In some cases, no, However, the nature and demands of the Necessary and Sufficient Closure Process on the Standards Based Management System should provide a pathway for the changes in management techniques, policy and behavior that have led to <u>major successes in</u> corporate America.

- A. Areas where needed management improvements have been identified by senior DOE and Contractor Management include:
 - Ownership
 - Management resolve for a standard-based system
 - Communications of performance expectations
 - Incorporation of clear requirements/standards into contracts
 - Reasonable arbitration of differences in interpretation
 - Consistent program direction
 - Integrated strategic planning
 - Delegation of decision making
 - Alignment of priorities
- **B.** At the bottom line, an effective N&S Closure Process and Standards Based Management System will only be achieved with significant management integration and teamwork at all levels:
 - Within DOE
 - Within Contractor Organizations
 - Between and among DOE and Contractors Entities
 - With Stakeholders

Show Slide 25.

- In this conclusion, summarize major issues raised during presentation.
- Invite questions on points that have not been made evident to audience.

Discussion Points Instructor/Trainee Activity Conclusion G. Show Slide 26. 1. Necessary and Sufficient What it is - - What it is not The points here supplement the slide and do not cover all slide points. The N&S Closure Process is a critical front end element of the Standards Based Management System. The N&S Closure Process focuses first on the work and hazards without initial assumptions of applicability of an arbitrary set of standards. Performance expectations are defined and agreed upon by DOE and its contractors. Determination of the appropriate N&S set of standards is made by an integrated team comprised of technical and operational experts and line management who are familiar with the work. This will enhance knowledge and ownership by the line. The N&S Closure Process integrity is vital. Failure to be able to defend the process will likely result in failure to defend the results. The N&S Closure Process goal must remain focused on the "right stuff" and not on "all the stuff" or the "minimum amount of stuff."

Show Slide 27.

The N&S process and the SBMS are real and being | .

implemented

Discussion Points

- The Criteria Document was developed through an expansive series of meetings among DOE and contractors. The criteria define the attributes of the N&S process and the other elements of the SBMS we have discussed today.
- The Department Standards Committee, chaired by Tara O'Toole, has representative from all the key DOE organizations EH, EM, DP, NS, HR, etc. Their role is to develop the department-wide strategy for implementing the criteria.
- The N&S process has been endorsed by the DSC, and officially adopted as the DOE process for selecting standards.
- Pilot demonstrations have been conducted throughout the complex to test the N&S process. These lessons learned have been and continue to be factored into the Department's standards program.
- As mentioned, there is a 6-hour workshop that is being offered to train those who will actually participated in the N&S process.
- A number of teams, like the one that developed the N&S process, are working on a variety of tasks that will help accelerate the institutionalization of needed enhancements to the SBMS.

3. The benefits should be clear

- We know exactly what's expected.
- We have a higher confidence in the fact that we have the appropriate set of standards.
- We are no longer at the whims of a highly changeable environment.
- We have a chance to work together and take real ownership of our work.
- We have a strong system that will allow for a clearer demonstration that we are doing work safely and effectively.

Instructor/Trainee Activity

• Hold up again the Criteria Document (Blue Book).

Show Slide 28.

Discussion Points

4. Why must you care!

Our world is continuing to change! We will change with it! In our vehicle of change, we can either become better drivers and determine our appropriate destinations or we can remain passengers in a trip to someone else's destination.

5. Closure

Many of you will directly participate in the Standards Based Management System and , in particular, in the N&S Closure Process. For those who do, the next step is to receive the advance N&S Closure Process training which focuses on and practices the process elements. Your management will determine how and when this next step will occur.

I hope this class has given you a better understanding of the N&S Closure Process and the Standards Based Management System - - and get you thinking about how you may be involved in supporting it in the future.

Instructor/Trainee Activity